

6. Reports on the Collection of Birds made during the Voyage of H.M.S. 'Challenger.'—No. VI. On the Birds of Ternate, Amboyna, Banda, the Ké Islands, and the Aru Islands. By T. SALVADORI, C.M.Z.S.

[Received November 26, 1877.]

The collection of birds made at the above-mentioned localities is not very large, numbering only 131 specimens, belonging to 79 species. None of these are new to science; but some are of special interest, as having been described quite recently or as being new to the locality where now they have been found.

I propose to treat of them separately, according to the localities.

I. *Birds from Ternate.*

[The ship arrived at Ternate on the evening of the 14th October, 1874, and sailed from Ternate at 11 A.M. on the 17th Oct. 1874.—*J. M.*]

The birds are only 12 in number, and belong to 10 species; a specimen of *Lorius cyanauchen*, although bought alive at Ternate, must have been brought there from a very different and far-away locality.

1. SCOPS MOROTENSIS, Sharpe.

Scops morotensis, Sharpe, Cat. Strig. p. 75, pl. vii. f. 1 (1875), (type examined).

[No. 325. Male: eyes yellow; stomach contained large grasshoppers.—*J. M.*]

One "male" (No. 325) in the dark rufous plumage.

All the specimens from Ternate which I have seen agree better with the form from Morty than with that from Halmahera, *S. leucospilus* (G. R. Gr.).

I know of other instances in which the birds inhabiting the small islands surrounding Halmahera, although very far one from the other, agree better *inter se* than with the form inhabiting the mainland.

2. TANYGNATHUS MEGALORHYNCHUS (Bodd.).

Psittacus megalorhynchus, Bodd. Tabl. Pl. Enl. p. 45 (1783) (ex Buffon, Pl. Enl. 713).

Eclectus megalorhynchus, Schleg.; Finsch, Die Papag. ii. p. 351 (1870).

[No. 337. Male: eyes white; bought alive at Ternate.—*J. M.*]

3. ECLECTUS RORATUS (Müll.).

Psittacus roratus, Müll. S. N. Suppl. p. 77 (1776) (♀); Cass. Pr. Ac. Nat. Sc. Philad. 1864, p. 240. no. 52.

Psittacus grandis, Gm. S. N. i. p. 335. no. 102 (1788) (♀).

Eclectus grandis, Wagl.; Finsch, Die Papag. ii. p. 340 (1868).

Eclectus polychlorus, ex Batchian, Halmahera et Ternate, auctt. (nec Scop.) (♂); Finsch, Die Papag. ii. p. 393 (partim) (1868).

[336. Male: eyes yellow. 361. Female: this is the female of No. 336; it was purchased along with others at Ternate and kept alive on board till the 28th Oct., when it was killed and skinned, as it proved a nuisance while alive.—*J. M.*]

Two specimens bought alive at Ternate, a "male" (No. 336) green and a "female" (No. 361) red; this one is very interesting, having some green feathers among the scapularies.

Both specimens are much smaller than the birds which I have seen from Halmahera.

4. LORIUS DOMICELLA (Linn.).

Psittacus domicella, Linn. S. N. i. p. 145. n. 26 (1766).

Domicella atricapilla, Wagl.; Finsch, Die Papag. ii. p. 763 (1868).

[No. 325. Male: eyes red.—*J. M.*]

One "male" (No. 335) not fully adult, bought alive at Ternate¹.

6. CYANALCYON DIOPS (Temmm.).

Alcedo diops, Temm. Pl. Col. 272 (1824) (type examined).

Halcyon diops, Steph.; Sharpe, Mon. Alced. pl. 77 (1868-1871).

[No. 334. Male: eyes black; stomach had insects.—*J. M.*]

7. PACHYCEPHALA MENTALIS, Wall.

Pachycephala melanura, part., Bp. Consp. i. p. 388 (ex Moluccis) (1850); G. R. Gr. (nec Gould), P. Z. S. 1860, p. 353; Schleg. Ned. Tijdschr. voor de Dierk. iv. p. 44 (1871).

Pachycephala albicollis, Temm. Mus. Lugd. (nec Lafr.) (Bp. *l. c.*).

Turdus armillaris, Temm. (Bp. *l. c.*).

Lanius cucullatus, Licht. (Bp. *l. c.*).

Pachycephala mentalis, Wall. P. Z. S. 1863, p. 30 (type examined).

Pachycephala nigrimentum, G. R. Gr. Hand-list, i. p. 388. sp. 5880 (1869), descr. nulla (type examined).

[No. 333. Male: stomach had insects.—*J. M.*]

8. CYRTOSTOMUS FRENATUS (S. Müll.).

Nectarinia frenata, S. Müll. Verh. Land- en Volkenk. p. 173 (note) (1843).

Cinnyris frenatus, Shelley, Mon. Cinnyr. pt. iii. (1877).

Cyrtostomus frenatus, Salvad. Atti R. Ac. Sc. Tor. xii. p. 317 (1877).

¹ 5. LORIUS CYANAUCHEN (Müll.).

Psittacus cyanauchen, S. Müll. Verhandl. Land- en Volkenk. p. 107 (1839-1844) (type examined).

Domicella cyanauchen, Finsch, Die Papag. ii. p. 773 (1868).

Domicella lory mysorensis, Meyer, Sitzb. k. Ak. Wiss. Wien, lxx. p. 233 (1874).

[No. 335. Male: eyes red.—*J. M.*]

One "male" bought alive at Ternate, but certainly brought there from the Island of Mysore, in Geelvink Bay, where only *L. cyanauchen* lives in the wild state.

[327. Male: eyes brown; stomach had insects. 329. Female.—*J. M.*]

9. *HERMOTIMIA AURICEPS* (G. R. Gr.).

Nectarinia auriceps, G. R. Gr. P. Z. S. 1860, p. 348.

Hermotimia auriceps, Salvad. Atti R. Ac. Sc. Tor. x. p. 228 (1874).

Cinnyris auriceps, Shelley, Mon. Cinnyr. pt. v. (1877).

[No. 326. Male: eyes brown; stomach had insects.—*J. M.*]

10. *TOTANUS GLAREOLA* (Linn.).

[No. 330. Female: eyes brown; stomach contained shells.—*J. M.*]

II. *Birds from Amboyna.*

[The 'Challenger' arrived at Amboyna on Sunday 4th Oct., 1874, and sailed from Amboyna on the 10th Oct., 1874, at 4 P.M.—*J. M.*]

During the stay 23 birds were procured, representing 15 species, as follows¹:—

1. *UROSPIZIAS IOGASTER* (S. Müll.)

Falco hiogaster, S. Müll. Verh. Land- en Volkenk. p. 110, note (1839–1844) (type examined).

Astur hiogaster, Sharpe, Cat. Accipitr. p. 104 (1874).

[No. 302. Male: eyes coral-red; legs orange; stomach had fish-bones and crabs.—*J. M.*]

2. *GEOFFROYUS RHODOPS* (G. R. Gr.).

Psittacus fuscicapillus, Vieill. N. D. xxv. p. 316, Java! (1817), (descr. falsa; type examined) (♀).

Psittacus rhodops, G. R. Gr. P. Z. S. 1861, p. 436, Waigiou! and Mysol! (descr. nulla; type examined).

Eclectus rhodops, Schleg. Mus. P.-B. *Psittaci*, p. 43 (1864), Ceram, Amboyna, and Bouru.

Pionias rhodops, part., Finsch, Die Papag. ii. p. 380 (1868).

Geoffroyus schlegelii, Salvad. Ann. Mus. Civ. Gen. x. p. 29. no. 40, Buru, Boano, Ceram, Amboyna, Arouko, Goram, Monawolka (1877).

[No. 304. Male: eyes white; bill, upper part reddish, lower blackish.—*J. M.*]

This species resembles *G. aruensis* (G. R. Gr.); but it is larger, has the under wing-coverts of a darker blue, and the female has a darker brown head.

The type of *Psittacus fuscicapillus*, Vieill., is certainly a female of this species; but the description is wrong, as also the locality.

Psittacus rhodops, G. R. Gr. (*l. c.*), was said to be from Waigiou and Mysol; but knowing that in these islands lives a representative

¹ [Besides the skins examined by Count T. Salvadori, two Cassowaries were procured alive, and the skins afterwards preserved. They appear to be immature examples of *Casuaris galeatus*, or of a very closely allied species.—P. L. S.]

form, *Geoffroyus pucherani*, Bp., I thought that it could not be the same bird as *Eclectus rhodops*, Schleg., from the Ceram group; accordingly I gave to Schlegel's species the name of *Geoffroyus schlegelii*. Having, however, quite recently seen Gray's types in the British Museum, I find that they really belong to the Ceramese species; and I am quite sure that the localities Waigiou and Mysol are wrong. Those specimens no longer bear Wallace's original labels, which circumstance may explain how it was that wrong localities have been attributed to them.

3. CEYX LEPIDA, Temm.

Ceyx lepida, Temm. Pl. Col. 595. f. 1, Amboyna (1836); Sharpe, Mon. Alced. pl. 46 (pt. ii. 1868).

[No. 303. Female: bill and legs red; eyes black; stomach had insects.—*J. M.*]

4. MACROPTERYX MYSTACEA (Less).

Cypselus mystaceus, Less. Voy. Coq. Zool. Atlas, pl. 22 (1826) (type examined).

Macropteryx mystacea, Salvad. Ann. Mus. Civ. Gen. x. p. 311. sp. 1 (1877).

[298. Male; 299. Female: eyes black; stomach had insects.—*J. M.*]

Two specimens—one "male" (No. 298), with the brown spot on the ear-coverts, and one female (No. 299), without the brown spot.

5. CYRTOSTOMUS ZENOBIA (Less.).

Cinnyris zenobia, Less. Voy. Coq. Zool. Atlas, pl. 30. f. 3 (1826), i. 2, p. 679 (1828)¹.

Cinnyris clementia, Less. Dict. Sc. Nat. i. p. 18 (1827).

Cyrtostomus melanogaster, G. R. Gr. Hand-list, i. p. 112. sp. 1390 (1869), descr. nulla.

Cyrtostomus zenobia, Salvad. Atti R. Ac. Sc. Tor. xii. p. 319 (1877).

[No. 308. Male; 312. Female; 313. Male: eyes black; stomach contained insects.—*J. M.*]

Three "males" (No. 308, 312, 313), apparently fully adult; all three have the feathers of the forehead tipped with metallic blue; one of them (No. 313) has the upper parts more greenish than the other two, which have the same parts of a rich olive-brown.

6. HERMOTIMIA ASPASIOIDES (G. R. Gr.).

Nectarinia aspasioides, G. R. Gr. P. Z. S. 1860, p. 348, Amboyna.

Hermotimia aspasioides, Salvad. Atti R. Ac. Sc. Tor. x. p. 208, 216 (1874), xii. p. 306 (1877).

Cinnyris aspasioides, Shelley, Mon. Cinnyr. pt. v. (1877).

¹ I have not been able to find the type of this species in the Museum of Paris.

[314. Male: eyes black. 312. Female: eyes black; stomach had insects.—*J. M.*]

Two specimens—one “male” (No. 314) not fully adult, with the green cap mixed with blue, and one “female” (No. 312).

7. *DICÆUM VULNERATUM*, Wall.

Dicæum vulneratum, Wall. P. Z. S. 1863, p. 32, note (Ceram; type examined).

[No. 315. Female: eyes brown; stomach had insects and seeds. Small bird.—*J. M.*]

This sex has not yet been described.

Fem. *Superne cinereo-fusca, alis et cauda obscurioribus, paullum nitentibus; pileo præsertim frontem versus brunneo tincto; supracaudalibus rubris; inferne cinerea; gastræo medio seu gula, colli antici, pectoris abdominisque parte media et subcaudalibus albis; rostro et pedibus fuscis.*

8. *BUDYTES VIRIDIS* (Gm.).

[305. Male: eyes brown; legs and bill black; stomach had insects. 310. Female: eyes brown. 319. Male: eyes brown; stomach had insects.—*J. M.*]

Three specimens—one “male” (No. 305) and one “female” (No. 310) scarcely different, and one “male” (No. 319) with the underparts of a paler yellow, and with the back rather greyish.

9. *MACROPYGIA AMBOINENSIS* (Linn.).

[301. Male: eyes red; feet red; bill black; fruit in stomach. 320. Female: eyes orange; stomach had seeds; legs red.—*J. M.*]

Two specimens—one fully adult “male” (No. 301), and one “female” (No. 320). The female has the cap of a uniform cinnamon colour, the breast more reddish than the male, and no green or purplish reflections on the nape, which is finely mottled with dark brown and reddish fulvous.

10. *CHARADRIUS FULVUS* (Gm.).

[No. 317. Male: eyes hazel; stomach contained worms and land-shells.—*J. M.*]

11. *EUDROMIAS VEREDUS* (Gould).

Charadrius veredus, Gould, P. Z. S. 1848, p. 38; id. B. Austr. vi. pl. 14.

Eudromias veredus, Harting, Ibis, 1870, p. 209, pl. vi.

[No. 318. Male: eyes hazel; stomach contained worms and land-shells.—*J. M.*]

12. *ÆGIALITIS GEOFFROYI* (Wagl.).

Charadrius geoffroyi, Wagl. Syst. Av. gen. *Charadrius*, sp. 19 (1827).

Ægialitis geoffroyi, Harting, Ibis, 1870, p. 378, pl. xi.

[No. 311. Male: eyes brown.—*J. M.*]

13. TRINGOIDES HYPOLEUCUS (Linn).

[No. 306. Female: eyes hazel; stomach had insects.—*J. M.*]

14. GALLINAGO STENURA (Kuhl).

“*Scolopax stenura*, Kuhl,” Bp. Ann. Stor. Nat. iii. fasc. x (1830).

Gallinago stenura, Schleg. Mus. P.-B. *Scolopaces*, p. 12 (1864);
Salvad. Cat. Syst. Ucc. di Borneo, p. 334. sp. 353 (1874).

[No. 316. Male: eyes black; stomach had worms.—*J. M.*]

15. BUTORIDES JAVANICA (Horsf.).

Ardea javanica, Horsf. Trans. Linn. Soc. xiii. p. 190 (1820);
Schleg. Mus. P.-B. *Ardeæ*, p. 43 (1863).

Butorides javanica, Salvad. Cat. Ucc. di Borneo, p. 351. sp. 370
(1874).

[No. 300. Male: eyes orange; legs yellow; bill black; crustacea
in stomach. 309. Female: eyes yellow; legs green.—*J. M.*]

Two specimens—one “male” (No. 300) fully adult, and a young
“female” (No. 309).

III. *Birds from Banda.*

[The ‘Challenger’ arrived at Banda on the 29th September, 1874,
and sailed from Banda on the evening of the 2nd October, 1874.—
J. M.]

Only 10 specimens, belonging to 7 species, are in the collection,
which, although a very small one, is of some interest, as birds from
Banda are rather scarce in Museums.

1. SAUROPATIS CHLORIS (Bodd.).

[No. 293. Male; 294. Female: eyes black; legs have a dull
brown tinge; base of the lower mandible white, the rest black.—
J. M.]

2. MONARCHA INORNATUS (Garn.).

Muscicapa inornata, Garn. Voy. Coq. Zool. Atlas, pl. 16. f. 2
(1826), & i. 2, p. 591 (1828), New Guinea (type examined).

Drymophila cinerascens, Temm. Pl. Col. 430. f. 2 (1827), Timor
(type examined).

Monarcha fulviventris, Hartl. P. Z. S. 1867, p. 830, Echiquier
Islands (type examined).

[No. 292. Male: eyes brown; legs and bill slate-blue; the bill
lighter than legs; stomach contained insects.—*J. M.*]

After having examined the types mentioned above and having
compared together many specimens from Timor, Banda, Amboyna,
Goram, Tijoer, Ternate, Halmahera, Batchian, Tifore, Sula, Ké
Islands, Aru Islands, Mysol, New Guinea (Sorong, Dorei, and Man-
nam), Mafor, the Admiralty Islands, and the Echiquier group, I
have arrived at the conclusion that they all belong to one species.
The *Drymophila cinerascens*, Temm., represents the fully adult bird;

and the *Muscicapa inornata*, Garn., is the young stage of the same, differing from the adult in the reddish colour of the outer edgings of the remiges. Under the name of *M. fulviventris* Hartlaub has described a specimen from the Echiquier group, with the abdomen rather pale, exactly like others from the other localities mentioned above.

3. RHIPIDURA SQUAMATA, S. Müll.

Rhipidura squamata, S. Müll. Verh. Land- en Volkenk. p. 189 (1839-1844), Banda (type examined).

Rhipidura griseicauda, Salvad. Ann. Mus. Civ. Gen. vii. p. 924. sp. 20 (1875), Waigiou.

[No. 289. Female: eyes hazel; stomach contained insects.—*J. M.*]

This species is allied to *R. rufifrons* (Lath.) from Australia, from which it differs in having the forehead black in the middle and white on the sides; the tail is grey, white-tipped, and with scarcely any reddish colour near the base. S. Müller described this species with the tail brown-black, instead of grey; and this mistake made me believe that the bird from Waigiou, described by me, was different.

4. PACHYCEPHALA PHÆONOTA (Müll.).

Myiolestes phajonotus, Müll. Mus. Lugd. (type examined); Bp. Consp. i. p. 358 (1850), Banda.

Pachycephala brunnea, Wall. P. Z. S. 1865, p. 478, Banda, Salvatty (type examined).

Pachycephala senex, Pelz. Verh. k. zool.-bot. Gesellsch. Wien, 1872, p. 429, Aru (type examined).

[No. 290. Male; 291. Female: eyes light hazel; legs flesh-colour; stomach contained insects.—*J. M.*]

The sexes are exactly alike.

The types in the Museum of Leyden are marked "Borneo," which is a mistake; Bonaparte has given the exact locality.

This species has a very extensive range; I have seen specimens from Banda, Ceram-laut, Mysol, Salvatty, Waigiou, Mafor, Ternate, Dammar, Mareh, Motir, and Tifore. It is not quite certain that the bird described by Von Pelzeln (*l. c.*) was really from the Aru Islands.

5. MYZOMELA BOIEI, S. Müll.

Nectarinia (Myzomela) boiei, S. Müll. Verh. Land- en Volkenk. p. 172 (1839-44) (type examined).

[No. 295. Female: eyes brown; stomach had insects. The male of this bird had a red head; but no specimen was shot.—*J. M.*]

6. ZOSTEROPS CHLORIS, S. Müll.

Zosterops chloris, S. Müll. in Mus. Lugd. (type examined); Bp. Consp. i. p. 398 (1850); Hartl. Journ. f. Orn. 1865, p. 24.

[No. 287. Male; 288. Female: eyes brown; legs slate-colour;

stomach contained insects. In flocks on trees near the shore.—*J. M.*]

The sexes are exactly alike.

To this species have been referred also specimens from Ternate and Bouru; but those from Ternate agree better with *Z. intermedia*, Wall., from Celebes; and one specimen from Bouru in the British Museum, collected by Wallace, belongs to a species not yet described.

7. CARPOPHAGA CONCINNA, Wall.

Carpophaga chalybura, G. R. Gr. (nec Bp.), P. Z. S. 1858, pp. 187, 196 (Aru).

"*Carpophaga chalybea*, Bp." (errore), Rosenb. Journ. f. Orn. 1864, p. 132. sp. 226 (Aru).

Carpophaga concinna, Wall. Ibis, 1865, p. 383. no. 52, Matabello Island, Aru (a small island west of) (type examined); Salvad. Ann. Mus. Civ. Gen. ix. p. 200. no. 39 (1876).

Carpophaga roseinucha, part., Schleg. Ned. Tijdschr. Dierk. iii. p. 197 (1865).

[No. 296. Female. This bird was sent on board alive as a present to the Professor.—*J. M.*]

IV. Birds from the Ké Islands.

[The ship arrived at Ké Doulan, Ké Islands, on the morning of the 25th September, 1874, and left on the morning of the 26th September.—*J. M.*]

The birds from Ké Islands are 25, representing 14 species; they have been all collected at the little island named Dulan¹.

The Ké Islands were quite unknown to naturalists before Wallace made a short stay there of six days in January 1857. He only obtained thirteen species in all², which were catalogued, together with those from the Aru Islands, by Mr. G. R. Gray³. Von Rosenberg made a longer stay on the Ké Islands, and collected there rather extensively; but no complete catalogue of his collection has been published. He gave an account of his visit to the Ké Islands, and of some of the birds collected there by him, in his 'Reis naar de zuidoostereilanden gedaan en 1865,' pp. 67-83.

Dr. Beccari in 1873 made a rather large collection of birds in the Ké Islands. Of this some of the new species have been already described by me⁴; but I propose to give a complete account of it as soon as my occupations permit.

¹ Cosmos di Guido Cora, ii. tav. ii. (1874).

² Ann. & Mag. Nat. Hist. (2), xx. p. 473 (1857).

³ P. Z. S. 1858, pp. 169-198.

⁴ "Nuove specie di uccelli delle Isole Aru e Kei, raccolte da Odoardo Beccari," Ann. Mus. Civ. Gen. vi. pp. 73-80 (1874); "Altre nuove specie di uccelli raccolte nella Nuova Guinea dal Signor L. M. D'Albertis e nelle Isole Aru e Kei dal Dott. O. Beccari," *op. cit.* vi. pp. 308-314; "Descrizione di sei nuove specie di uccelli delle Moluche, delle Kei e delle Isole Aru," *op. cit.* vii. pp. 983-990 (1875).

1. PANDION LEUCOCEPHALUS, Gould.

Pandion leucocephalus, Gould, P. Z. S. 1837, p. 138; id. B. Austr. i. pl. 6 (1848); Sharpe, Cat. Accipitr. p. 451 (1874).

[No. 268. Male: eyes yellow; legs whitish; bill black; stomach contained fish. Shot by Chauner; no others were seen. Shot far in the bush from the shore.—*J. M.*]

2. GEOFFROYUS KEYENSIS, Schleg.

Psittacus capistratus, G. R. Gr. (nec Bechst.), P. Z. S. 1858, p. 183 (♀), Ké Islands (type examined).

Eclectus personatus (part.), Schleg. Ned Tijdschr. Dierk. iii. p. 332 (A. grande forme (partim), p. 333) (1866); id. Mus. P.-B. *Psittaci*, Revue, p. 18 (partim) (1875).

Pionias rhodops (part.), Finsch, Die Papag. ii. pp. 388, 955 (1868).

Geoffroyus keyensis, Schleg. MS. (Finsch, Die Papag. ii. p. 956); Salvad. Ann. Mus. Civ. Gen. x. p. 29. sp. 37 (1877).

[No. 271. Male; 269, 270. Females: eyes white; upper mandible red in the male, both black in the females; stomach contained seeds and fruit.—*J. M.*]

Three specimens—a young “male” (No. 271) in transitional plumage, an adult “female” (No. 270) with the head pale brown olive, and a not fully adult “female” (No. 269) with the head conspicuously tinged with green.

3. EOS RUBRA (Gm.)

Domicella rubra, Finsch, Die Papag. ii. p. 786 (1868).

Psittacus (Eos) bernsteinii, Rosenb. Nat. Tijdschr. v. Ned. Ind. xxv. p. 145 (1863), Ké Islands.

Lorius squamatus, Schleg. (nec Bodd.), Mus. P.-B. *Psittaci*, p. 124. no. 1, 2 (1864) (types examined).

Domicella schlegelii, Finsch, Die Papag. ii. p. 792 (1868), Ké Islands (type examined).

[No. 272. Male; 273. Female: eyes light red; bill dull red; legs black; stomach contained seeds with some insects. Only two were shot. The Professor has one of the same species alive on board, bought at Ké Doulan.

No. 324. Female: eyes brown; legs black; bill rose-coloured. This bird was purchased alive at Ké Doulan, Ké Islands, and kept till today (Oct. 12, 1874) on board, and was killed on account of the noise it made.—*J. M.*]

Three specimens—one “male” (No. 272) and one “female” (No. 273) fully adult and alike, and a “female” (No. 324) not fully adult, with some of the feathers of the underparts edged with blue and turning to greenish in the hidden part.

The *Domicella schlegelii*, Finsch, *l. c.* (= *Lorius squamatus*, Schleg.), was established on some young birds, which have the feathers of the underparts edged with blue; the same thing happens in the young of *E. riciniata* and of *E. cyanogenys*.

4. RHIPIDURA ASSIMILIS, G. R. Gr.

Rhipidura assimilis, G. R. Gr. P. Z. S. 1858, p. 176, Ké Islands (type examined).

[No. 286. Male: insects in the stomach; eyes black.—*J. M.*]

This species is allied to *R. isura*, Gould, from Australia, and to *R. setosa* (Q. & G.) from New Ireland and New Guinea; it differs from the first in the larger dimensions, in the paler band across the breast, and in the spot at the tip of the two outer tail-feathers less extended and light fulvous instead of white; from *R. setosa* it is easily distinguished by the upper tail-coverts rufescent.

5. GRAUCALUS POLLENS, Salvad.

Graucalus pollens, Salvad. Ann. Mus. Civ. Gen. v. p. 75 (1874).

[No. 280. Female: eyes black; stomach contained seeds; feet and bill black.—*J. M.*]

This specimen agrees entirely with the typical females described by me. This species comes next to *G. caledonicus* (Gm.) from New Hebrides and New Caledonia; but it differs in the dimensions being somewhat smaller and in the darker colour. It is also allied to *Gr. personatus*, Müll., from Timor; but it is larger, darker, and also conspicuously different in the under wing-coverts, which are not white, but dark like the rest of the plumage.

In the British Museum I have seen a *Graucalus*, said to have been collected by Wallace in the Sula Islands, and wrongly named *G. temmincki*, which is very much like the females from the Ké Islands, except that it is a little smaller.

6. LALAGE KARU (Less.).

Lanius karu, Less. Voy. Coq. Atlas, pl. 16 (1826).

Ceblepyris karu, Less. Voy. Coq. Zool. i. 2, p. 633 (1828) (type examined).

Lalage karu, Hartl. Journ. f. Orn. 1865, p. 168.

[Nos. 282, 283. Males: eyes black; stomach contained in the one seeds, in the other insects.—*J. M.*]

Two specimens, one "male" (No. 282) fully adult, with the upper parts shining black, the under wing-coverts pure white, and the breast and the abdomen barred across; this is exactly like another specimen from Naiabui, collected by Signor D'Albertis and marked female (!) (Ann. Mus. Civ. Gen. ix. p. 108, 1876). The second specimen (No. 283) is also marked "male:" it is not fully adult; it has the upper parts grey, and the under wing-coverts, as well as the underparts, tinged with reddish.

I suspect that to the same species must be referred the *Ceblepyris rufiventris*, Jacq. & Pucher., and I question whether it really was from Raffles Bay. The type of this species, examined by me in the Museum of Paris, agrees entirely with two specimens from the Aru Islands, collected by Beccari, and which are exactly like the type of *Lalage polygrammica*, G. R. Gr., also from the Aru Islands.

7. *DICRUOPSIS MEGALORNIS* (G. R. Gr.).

Dicrurus megalornis, G. R. Gr. P. Z. S. 1858, pp. 199, 193, Ké Islands (type examined).

Chibia megalornis, Sharpe, Cat. Birds in the Brit. Mus. iii. p. 242. no. 9 (1877).

[Nos. 274, 275. Both females: eyes red; legs and bill black; stomach contained insects.—*J. M.*]

This bird and the other allied Austro-Malayan species have been united by Mr. Sharpe to the genus *Chibia*, Hodgs., the type of which, *Chibia hottentotta* (Linn.), has a much longer and more acute bill, and is also very conspicuous for the tuft of silky hairs springing from the forehead—a feature which, among the Austro-Malayan species, is only to be found in *Dicrurus pectoralis*, Wall., from the Sula Islands¹.

8. *PHILEMON PLUMIGENIS* (G. R. Gr.).

Tropidorhynchus plumigenis, G. R. Gr. P. Z. S. 1858, pp. 174, 191, Ké Islands (type examined).

[No. 276. Male; 277. Sex uncertain: eyes brown; stomach contained seeds.—*J. M.*]

Both are young birds, with the feathers of the sides of the breast with broad yellow edges, and with the outer edges of the remiges tinged with olive.

9. *CALORNIS METALLICA* (Temm.).

Lamprotornis metallicus, Temm. Pl. Col. 266, 1824, Amboyna (type examined).

Calornis viridescens, G. R. Gr. P. Z. S. 1858, p. 181, Aru Islands (type examined).

Calornis nitida, G. R. Gr. P. Z. S. 1858, p. 181, New Ireland (type examined).

Calornis amboinensis, G. R. Gr. P. Z. S. 1858, p. 182, Amboyna (type examined).

Calornis gularis, G. R. Gr. P. Z. S. 1861, p. 431, Mysol (type examined).

Calornis purpurascens, G. R. Gr. Hand-list ii. p. 26. no. 6377, (1870), Goram (type examined).

[No. 284. Female: eyes red; stomach contained seeds; caught by Suhm in a spider's web.—*J. M.*]

One fully adult "female" (No. 284), resembling a fully adult male.

This species has been found in nearly all the Moluccan and Papuan Islands, from the Sula Islands westward to the Soloman Islands eastward, and lives also in the northern part of Australia.

Temminck, in the text of the 'Planches Coloriées,' says that his

¹ I think that the Austro-Malayan species may be more properly referred to a peculiar genus, which I propose to call *Dicruopsis*, characterized as follows:—*Rostrum crassum, rostro specierum generis Dissemuri simile, sed culmine minus acuto, crassiusculo; cauda bifida divaricata, rectricibus extimis superne introrsum paulum convolutis.*

L. metallicus was from Timor and Celebes ; but this seems to be a mistake, as the typical specimens in the Museum of Leyden, examined by me, are from Amboyna. In Celebes and in Timor lives another species of the genus *Calornis*, and not *C. metallicus*.

Specimens from the different localities do not differ specifically : those from Cape York are somewhat more purplish, but not always in the same way ; one from Goram, a small island near Amboyna (*C. purpurascens*, Gray), is exactly like some specimens from Cape York.

Some specimens have the throat more purplish than others ; one from Mysol (*C. gularis*, Gray) cannot be separated from others from Halmahera and Cape York.

10. CARPOPHAGA CONCINNA, Wall.

[Nos. 263–264. Males ; 265, 266, 267. Females : eyes between orange and a coral-red ; the stomach in all contained fruit and seeds ; legs coral-red ; bill black. There were a great many of these Nutmeg Pigeons shot, enough for lunch for the whole ward-room. They were very good eating.—*J. M.*]

11. MYRISTICIVORA BICOLOR (Scop.).

Myristicivora bicolor, Salvad. Ann. Mus. Civ. Gen. ix. p. 276 (1877).

[No. 278. Male : white Pigeon ; eyes brown ; stomach contained fruit ; feet blue ; bill black.—*J. M.*]

This bird has the under tail-coverts entirely white.

In a recent paper of mine¹ I have shown that *M. bicolor* (Scop.), *M. spilorrhoea* (G. R. Gr.), and *M. melanura*, G. R. Gr., are perfectly distinct species, and that *M. bicolor* (Scop.) most likely is a migratory bird in the Moluccas, as it is in Celebes, and that, while in Celebes it is to be found together with *M. luctuosa* (Reinw.), in the Moluccas it lives together with *M. melanura*, Gray.

12. MACROPYGIA KEYENSIS, Salvad.

Macropygia, sp., Wall. Ann. & Mag. Nat. Hist. (2) xx. p. 473 (partim), 1875, Ké Islands.

Macropygia phasianella, part., G. R. Gr. (nec Temm.), P. Z. S. 1858, pp. 187, 196, Ké Islands ; Wall. Ibis, 1865, p. 389. sp. 81 (partim) ; Rosenb. Reis naar zuidoostereil. p. 81 (1867).

Macropygia turtur, part., Schleg. Mus. P.-B. *Columbæ*, pp. 110, 113, 114 (specimina Ins. Key), 1873.

Macropygia keyensis, Salvad. Ann. Mus. Civ. Gen. ix. p. 204. sp. 64 (1876).

[No. 279. Male : eyes hazel ; stomach contained seeds ; legs red ; bill black.—*J. M.*]

I named this Ké-Islands species (*l. s. c.*) before seeing a fully adult bird, feeling quite confident, from Schlegel's description, that it was really distinct. I have recently seen the adult specimens contained in the Leyden Museum, and I am satisfied that the Ké-

¹ "Osservazioni intorno alle speci del genere *Myristicivora*, Rehb." (Ann. Mus. Civ. Gen. ix. pp. 265–277).

Islands bird belongs to a peculiar form. I shall now give a full description of the adult bird collected during the 'Challenger' expedition, and shall proceed after to point out the principal differences from the allied forms.

Capite rufo-vinaceo, sincipite et genis pallidioribus; vertice et occipite grisescentibus; collo postico viridi et purpureo nitente, conspicue cinerascete; dorso, uropygio, supracaudalibus alarumque tectricibus exterioribus brunneo-cinnamomeis, punctulis nigris obsoletis adpersis; gula rufescenti-albida; collo antico et pectore summo vinaceis, fasciis transversis nigris notatis; pectore imo et abdomine albido-fulvescentibus, fasciis transversis nigris notatis; abdominis lateribus et subcaudalibus brevioribus pallide cinnamomeis, nigro transfasciatis; subcaudalibus longioribus et tectricibus alarum inferioribus cinnamomeis unicoloribus; remigibus fuscis, exterius cinnamomeo limbatis; cauda superne brunneo-grisescente, inferne pallidior et magis grisescente; rectricibus tribus utrinque lateralibus partim læte rufis, fascia lata subapicali nigra notatis; rostro nigro; pedibus rubris.

Long. tot. circa 0^m·370; al. 0^m·018; caud. 0^m·190; rostr. 0^m·018; tarsi 0^m·021.

This species is intermediate between *M. amboinensis* (Linn.) and *M. doreya* (Bp.).

It differs from *M. amboinensis* (which it much resembles in the light underparts):—

1st. In the greyish tinge of the vertex, of the occiput, and of the hind neck;

2nd. In the more vinaceous colour of the front neck;

3rd. In the more whitish underparts;

4th. In the darker hue of the back;

5th. In the larger dimensions.

From *M. doreya*, Bp., to which it bears a great resemblance in the upper parts, it differs:—

1st. In the more greyish hind neck;

2nd. In the much less vinaceous front neck and upper breast;

3rd. In the more whitish underparts;

4th. In the lighter and more greyish tail;

5th. In the larger dimensions.

13. TRINGOIDES HYPOLEUCUS (Linn.).

[No. 285. Eyes black; stomach contained portion of shells.—*J. M.*]

14. NUMENIUS UROPYGIALIS, Gould.

[No. 281. Female: eyes black; stomach contained crustacea (crabs).—*J. M.*]

In my Catalogue of the Birds of Borneo I have referred this eastern form to *N. phæopus* (Linn.); but now I think that *N. uropygialis*, Gould, with the uropygium constantly mottled with dark grey, is entitled to specific rank.

V. *Birds from the Aru Islands.*

[The ship arrived at Dobbo, Aru Islands, about noon on the 16th September, 1874. The same afternoon some birds were shot near the village of Dobbo; these were all put in spirits. On the 17th a large party landed on the island of Wokan and shot thirty-two specimens. On the 19th September thirteen specimens were shot at Wanumbai, and on the afternoon of the 22nd and morning of the 23rd seventeen more. The ship left Aru on the morning of the 23rd September, 1874, at 6 P.M.—*J. M.*]

The birds collected in the Aru Islands are 61, belonging to 40 species; they are from three different localities—Wokan, Wanumbai, and Dobbo, already visited by Wallace, Von Rosenberg, or Beccari.

Only one species, *Drymacædus beccarii*, lately described by me from the Arfak Mountains, is new to the islands.

1. CUNCUMA LEUCOGASTER (Gm.).

Haliaëtus leucogaster, Sharpe, Cat. Accipitr. p. 307 (1874).

[No. 262. Female: eyes yellow; stomach contained fish. Shot on Wokan on 21st September. Skinned by Crosbie.—*J. M.*]

This bird is in transitional plumage, like the specimen figured by Schlegel, Valkvog. pl. 4. f. 2.

2. HALIASTUR GIRRENERA (Vieill.).

Haliaëtus girrenera, Vieill. Gal. Ois. i. p. 31 (syn. emend.), pl. x. (1825) (type? examined).

[No. 235. Male: eyes red; stomach contained crabs and cuttlefish. Shot on Wokan.—*J. M.*]

I have found in the Museum of Paris a specimen marked "Papous (Freycinet, 1820)," which seems to be the type of Vieillot.

3. UROSPIZIAS POLIOCEPHALUS (G. R. Gr.).

Accipiter poliocephalus, G. R. Gr. P. Z. S. 1858, pp. 170, 189, Aru Islands (type examined); Sclat. Ibis, 1859, p. 276, 1860, p. 322, pl. x. (fig. avis adultæ tantum); Rosenb. Nat. Tijdschr. Ned. Ind. xxv. p. 228. n. 47 (1863); id. Journ. f. Orn. 1864, p. 116. n. 47; Kaup, P. Z. S. 1867, p. 177; Wall. Ibis, 1868, p. 12 (partim); Salvad. Ann. Mus. Civ. Gen. vii. p. 75, sp. 7, Ansus (1875).

Nisus poliocephalus, part., Finsch, New Guin. p. 155 (1865); Schleg. Ned. Tijdschr. Dierk. iii. p. 326 (partim) (1866); id. Mus. P.-B. Revue Accipitr. p. 88 (1873); Gieb. Thes. Orn. ii. 711 (1875).

Urospiza poliocephalus, G. R. Gr. Hand-list, i. p. 34. sp. 336 (1869).

Astur poliocephalus, Rosenb. Reis naar zuidoostereil. p. 36 (1862); Sharpe, Cat. Accipitr. p. 117 (specim. a, b tantum) (1874).

Urospizias poliocephalus, Gurn. Ibis, 1875, p. 365.

Astur contumax, Rosenb. Reis naar zuidoostereil. p. 36 (Aru), descr. nulla (1867).

Urospizias spilothorax, Salvad. Ann. Mus. Civ. Gen. vii. p. 900. sp. 1 (1875), Arfak and Jobi, x. pp. 115, 117. sp. 5 (1877).

Accipiter etorques, part., Sclat. P. Z. S. 1877, p. 109. n. 45 (young specimen).

[No. 253. Male, from Wanumbai.—*J. M.*]

This bird is young.

I have found in the museums of Leyden and Berlin two specimens which are very much like my *U. spilothorax*; but they have only a few longitudinal dark spots on the lower part of the breast, showing that these spots are not a permanent character, and that my *U. spilothorax* represents only a stage of *U. poliocephalus*.

4. MICROGLOSSUS ATERRIMUS (Gm.).

[No. 206. Wokan. Male: eyes black; cheek-membrane red; stomach contained many of the insides of kernels of nuts. This was shot on the top of one of the highest trees. Only one seen at the time.—*J. M.*]

I have seen many specimens from the Aru Islands, and these are in general much smaller than those from New Guinea; and I think that the type of *Psittacus alecto*, Temm., which I have seen in the Museum of Leyden, must have come from the Aru Islands¹. I do not think that there is more than one species of the genus *Microglossus*.

5. CYCLOPSITTACUS MELANOGENYS (Rosenb.).

"*Psittacula melanogenia*, Rosenb." Schleg. Ned. Tijdschr. v. Dierk. iii. p. 330 (1866), Aru (type examined); Rosenb. Nat. Tijdschr. Ned. Ind. xxix. p. 142 (1867).

Psittacula melanogenys, Finsch, Die Papag. ii. p. 626 (1868).

Cyclopsittacus melanogenys, Salvad. Ann. Mus. Civ. Gen. x. p. 29, sp. 33 (1877).

[No. 207. Wokan. Female: eyes black; legs with a greenish tinge.

No. 208. Wokan. Probably a male; but the specimen was too much injured to determine.—*J. M.*]

The example, without indication of the sex, is most likely a female, having the ear-coverts orange.

6. ECLECTUS POLYCHLORUS (Scop.).

Psittacus polychlorus, Scop. Del. Flor. et Faun. Insubr. p. 87, n. 27 (1786) (ex Sonnerat), ♂.

Eclectus linnæi, Wagl. Mon. Psitt. p. 571, t. xxi. (1832), ♀.

Eclectus polychlorus, var. *aruensis*, G. R. Gr. P. Z. S. 1858, p. 183.

¹ The specimen in the Berlin Museum, which has been regarded as a second one of *M. alecto*, looks smaller than the New-Guinea specimens from having the primaries cut off.

Eclectus polychlorus, Salvad. Ann. Mus. Civ. Gen. x. p. 31. sp. 7 (1877).

[No. 212. Wokan. Male: eyes orange; upper mandible red towards the base, and whitish-yellow towards the tip; lower one jet-black; stomach contained inside-coating of cocoa-nut, and some species of comminuted red coral (tubular coral); feet black.—*J. M.*]

Mr. G. R. Gray considered the Aru specimeus as forming a peculiar race of *E. polychlorus*, on account of the yellowish band at the tip of the tail being more conspicuous and tinged with reddish; but the differences are very slight and not constant.

7. CHALCOPSITTACUS SCINTILLATUS (Temm.).

Psittacus scintillatus, Temm. Pl. Col. p. 569 (1835), Lobo, juv. (type examined).

Chalcopsitta rubrifrons, G. R. Gr. P. Z. S. 1858, p. 182. pt. 135 (ad.), Aru (type examined).

Domicella scintillata, Finsch, Die Papag. ii. p. 752 (1868).

Chalcopsittacus scintillatus, Salvad. Ann. Mus. Civ. Gen. x. p. 34, sp. 75 (1877).

[No. 213. Wokan. Male: eyes dull red; feet black; both mandibles black; stomach quite empty.

No. 229. Wokan. Male: eyes orange; feet and bill black; stomach contained insects and leaves.—*J. M.*]

Both specimens are fully adult.

8. TRICHOGLOSSUS NIGRIGULARIS, G. R. Gr.

Trichoglossus nigrigularis, G. R. Gr. P. Z. S. 1858, p. 183, Aru (type examined).

Trichoglossus cyanogrammus, part., Finsch, Die Papag. ii. 830 (1868).

[No. 237. Male, Wokan: eyes red, bill red; legs slate-colour; stomach contained small seeds. Shot at Wokan.—*J. M.*]

This species is confined to the Aru Islands and to the Ké Islands, and it is quite distinct from *T. cyanogrammus* (Wagl.), with which it has been assimilated by Wallace, Schlegel, and Finsch.

I have seen many specimens of both species, and I have found that constantly *T. nigrigularis* differs from *T. cyanogrammus*:—

1st. In the red of the breast inclining to orange, paler and with a most conspicuous yellow tint near the dark edges of the feathers.

2nd. The dark edges of the breast-feathers are much narrower, as in *T. massenæ*.

3rd. The head above has only two colours, blue in the anterior half, greenish in the other half; while in *T. cyanogrammus* the head above has three colours, blue on the sinciput, green on the vertex, and purplish-brown on the occiput, like *T. massenæ*.

4th. The middle of the abdomen is generally blackish.

5th. The dimensions are larger.

The Ké-Islands specimens are a little larger than those from the Aru Islands.

9. SAUROPATIS CHLORIS (Bodd.).

Halcyon sordida, var., G. R. Gr. P. Z. S. 1858, p. 172 (Aru).

[No. 244. Female, Dobbo: legs slate, with slightly bluish tinge; eyes black. Shot on Dobbo on the 20th September, 1874.—*J. M.*]

This bird has the upper parts very dark, and in that respect approaches *S. sordida* (Gould), to which Mr. Gray thought that the Aru birds should be referred; but I have seen other specimens from the Aru Islands with the upper parts of a much brighter colour, exactly like others from Amboyna, Bouru, and other localities.

The true *S. sordida* (Gould) is a much larger bird.

10. SAUROPATIS SANCTA (Vig. & Horsf.).

Halcyon sanctus, Sharpe, Mon. Alced. pl. 91 (1868–1871).

Sauropatis sancta, Salvad. Ann. Mus. Civ. Gen. x. p. 306, sp. 33 (1877).

[No. 219. Male (young), Wokan: eyes black; upper mandible and edge of lower black, under base of lower light-coloured; feet brown.—*J. M.*]

11. SAUROMARPTIS GAUDICHAUDI (Q. & G.).

Dacelo gaudichaudii, Quoy & Gaim. Voy. Uran. Zool. p. 112, pl. 25 (1824), Waigiou, Guebé (type examined); Sharpe, Mon. Alced. pl. 116 (1868–1871).

Sauromarptis gaudichaudi, Salvad. Ann. Mus. Civ. Gen. x. p. 306, sp. 35 (1877).

[203. Male; 204. Female, Wokan: eyes black; legs greenish, yellow tinge; stomach contained insects and portions of leaves.—*J. M.*]

The male has the tail blue; and the female has the tail chestnut.

12. SAUROMARPTIS TYRO (G. R. Gr.).

Dacelo tyro, G. R. Gr. P. Z. S. 1858, p. 171, pl. 133, Aru (type examined); Sharpe, Mon. Alced. pl. 117 (1868–1871).

Sauromarptis tyro, Salvad. Ann. Mus. Civ. Gen. x. p. 307, sp. 36 (1877).

[No. 205. Young male? Wokan: eyes black; legs greenish-yellow tinge; stomach contained insects and portions of leaves.—*J. M.*]

This bird differs from the adult in having the underparts entirely reddish, and in the blue of the wings inclining to greenish.

13. ÆGOTHELES WALLACEI, G. R. Gr.

Ægotheles wallacei, G. R. Gr. P. Z. S. 1859, p. 154, Dorey, (type examined); Schleg. Ned. Tijdschr. Dierk. iii. p. 340 (1866), Aru; Salvad. Ann. Mus. Civ. Gen. x. p. 310, sp. 7 (1877).

Caprimulgus brachyurus, Rosenb. Nat. Tijdschr. Ned. Ind. xxix. p. 143 (1867), Aru (type examined).

[No. 259. Female, Wanumbai.—*J. M.*]

I have compared this specimen with the type in the British Mu-

seum and with two other specimens from New Guinea, collected by D'Albertis and Brnijn's men. From all these it differs in the finer vermiculations, and in the somewhat smaller dimensions, and perhaps may belong to a different species; but we must see some more specimens from the Aru Islands before we can decide the question.

The *Caprimulgus brachyurus*, Rosenb., is a young bird with the tail incompletely developed.

14. MACROPTERYX MYSTACEA (Less.).

[No. 254. Male, Wanumbai: eyes black.—*J. M.*]

This bird has a brown spot on the ear-coverts.

15. HIRUNDO JAVANICA, Sparrm.

Hirundo frontalis, Quoy & Gaim. Voy. Astrol. Zool. i. p. 204, pl. 12. f. 1 (1830), Dorey (type examined).

[No. 225. Female, Dobbo: eyes black.—*J. M.*]

16. HYLOCHELIDON NIGRICANS (Vieill.).

Hirundo nigricans, Vieill. N. D. xiv. p. 523 (1817), New Holland (type examined).

[No. 226. Male, Dobbo: eyes black. Shot by the Professor at the village of Dobbo.—*J. M.*]

17. MACHÆRORHYNCHUS XANTHOGENYS, G. R. Gr.

Machærirhynchus xanthogenys, G. R. Gr. P. Z. S. 1858, p. 176, Aru (type examined); Salvad. Atti R. Acc. Sc. Tor. x. p. 375. sp. 2 (1875).

[No. 234. Male, Wokan: eyes and bill black; feet slate. Shot at Wokan.—*J. M.*]

18. GRAUCALUS MELANOPS (Lath.).

Campephaga melanops, var., G. R. Gr. P. Z. S. 1861, p. 435.

[No. 228. Female, Dobbo: eyes brown; stomach contained insects; legs and bill black. Shot by the Professor at the village of Dobbo.—*J. M.*]

The specimen agrees entirely with *black-faced* Australian males, and with male birds collected by Signor D'Albertis at Yule Island (Ann. Mus. Civ. Gen. vii. (1875), p. 820. sp. 41).

19. EDOLIOSOMA MUELLERI, Salvad.

Ceblepyris plumbea, part., S. Müll. (nec Wagl.), Verh. Land- en Volkenk. p. 189 (1839-1844), New Guinea only (type examined).

Edoliosoma mülleri, Salvad. Ann. Mus. Civ. Gen. vii. p. 928 (1875).

[No. 260, Wanumbai: male. No. 245. Female: eyes hazel; bill black; legs dark with brownish tinge; stomach had insects. Shot on 20th, Dobbo.—*J. M.*]

These specimens agree in every respect with New-Guinea specimens. *Edoliosoma tenuirostre* (Jard. et Selby), from Australia, is scarcely different from the New-Guinea bird; perhaps it is a little larger.

S. Müller, under the name of *Ceblepyris plumbea*, has united a specimen from Utanata and a young bird from Timor; but this, according to me, belongs to a much lighter species, not yet named, of which I have seen adult specimens in the British Museum. With the same name of *C. plumbea* there is in the Leyden Museum a specimen marked "Borueo:" it is a young bird exactly like that from Timor; and I think that the locality is wrong. On the evidence of this specimen Hartlaub (Journ. f. Orn. 1865, p. 155) has asserted the existence of *C. plumbea*, Müll., in Borneo.

20. DICRUROPSIS ASSIMILIS (G. R. Gr.).

Dicrurus assimilis, G. R. Gr. P. Z. S. 1858, p. 129, Aru (type examined).

Chibia assimilis, Sharpe, Cat. B. Brit. Mus. iii. p. 239 (1877).

[No. 214. Female, Wokan: eyes dull red; feet and bill black; stomach contained insects.—*J. M.*]

21. COLLURICINCLA MEGARHYNCHA (Q. & G.).

Muscicapa megarhyncha, Quoy & Gaim. Voy. Astrol. Zool. i. p. 172, pl. 3. f. 1 (1830), Dorey (type examined).

Napothera elæoides, Müll., Mus. Lugd. (type examined).

Myiolestes aruënsis, G. R. Gr. P. Z. S. 1858, p. 180, Aru (type examined).

Pinarolestes megarhynchus, Sharpe, Cat. B. Brit. Mus. iii. p. 295 (1877).

[No. 240. Male: eyes hazel; legs slate. Shot at Wanumbai.—*J. M.*]

I quite agree with Mr. Sharpe in uniting the Aru bird with the New-Guinea one.

22. RECTES ARUËNSIS, Sharpe.

Rectes dichrous, G. R. Gr. (nec Bp.), P. Z. S. 1858, p. 179, Aru.

Rectes aruënsis, Sharpe, Cat. B. Brit. Mus. iii. p. 285 (1877), Aru (type examined)¹.

[No. 238. Female, Wanumbai: eyes dull red; feet slate-colour with a violet tinge; stomach contained land-shells and remains of insects.—*J. M.*]

255. Female, Wanumbai: eyes hazel.—*J. M.*]

These specimens, both marked females, and a female collected by Beccari in the Aru Islands, agree in having the head blackish, the front neck blackish tinged with reddish brown, the uropygium and the upper tail-coverts blackish brown, the tail blackish above, and decidedly reddish brown underneath. These three specimens, all

¹ The type of *Rectes dichrous ceramensis*, Meyer (Sitzb. Ak. Wien, lxix. p. 208), which I have lately seen in the Museum of Vienna, is a specimen of *R. uropygialis*, Gray, and not of *R. aruënsis*, as Mr. Sharpe suspects. The locality, Ceram, is, no doubt, wrong. *Rectes draschi*, Pelzeln, Verh. z.-b. Gesell. Wien, 1876, p. 218, is a female of *Edoliosoma schisticeps*, G. R. Gr. (ex Hombr. & Jacq. Voy. Pôle Sud, Atlas. Zool. pl. 10. f. 1, ♀).

marked females, differ from two other specimens collected by Beccari, marked males. These have the head, the neck, the tail, and the upper tail-coverts jet-black; and the breast in one specimen is tinged with black more conspicuously than in the others. Ought we to believe that the plumage of the first three specimens, described by Sharpe as that of the young bird, is also the plumage of the adult female, or that by a strange combination all the three specimens marked females are really young ones?

23. *CRACTICUS CASSICUS* (Bodd.).

[No. 218. Female, Wokan: eyes dark, deep blue; base of the mandibles light-coloured, with a tinge of blue, tips of mandibles black; stomach with leaves and seeds.—*J. M.*]

24. *CYRTOSTOMUS FRENATUS* (S. Müll.).

[No. 222. Male, Wokan: eyes black; bill and feet black.—*J. M.*]

25. *MYZOMELA NIGRITA*, G. R. Gr.

Myzomela nigrata, G. R. Gr. P. Z. S. 1858, p. 173, Aru (type examined).

Myzomela erythrocephala, Meyer (nec Gould), Sitzb. k. Ak. Wiss. zu Wien, lxx. p. 204 (1874), ♀ and young ♂ (specimens examined).

[No. 232. Wokan, male: eyes hazel; bill and feet black; stomach had insects.—*J. M.*]

Gray describes the male as "entirely shining deep black," omitting to mention that it has the under wing-coverts and the inner edges of the remiges white.

26. *XANTHOTIS FILIGERA* (Gould).

Ptilotis filigera, Gould, P. Z. S. 1850, p. 278, pl. 34, Cape York.

[No. 261. Wanumbai, male.—*J. M.*]

This bird has the light spots on the nape scarcely visible. Two specimens from Utanata, collected by S. Müller, in the Museum of Leyden, belong to this species and not to the northern form *X. chrysotis* (Less.).

27. *DRYMAÆDUS BECCARII*, Salvad.

Drymaædus beccarii, Salvad. Ann. Mus. Civ. Gen. vii. p. 965. sp. 52 (1875), Arfak.

[No. 257. Wanumbai, male.—*J. M.*]

This example agrees completely with the type from the Arfak Mountains. This is a new species for the Aru Islands.

28. *CALORNIS METALLICA* (Temm.).

[Nos. 215, 216, 217. Males, Wokan: eyes coral-red; bill and legs black; small black seeds in the stomach of the adult males. The above were the most abundant birds we saw on the 17th September 1874.—*J. M.*]

29. MINO DUMONTI, Less.

[No. 250. Wanumbai, male : eyes yellow. No. 233. Wanumbai, female : eyes yellow ; legs and bill yellow ; stomach contained seeds.—*J. M.*]

30. PARADISEA APODA, Linn.

[Nos. 248, 249. Males : eyes yellow. No. 247. Female : eyes brown. No. 202. Young male : eyes pale yellow ; legs light fawn-colour ; the stomach was empty. This bird was shot by Mr. Abbot ; he saw two others at the same time, but noticed none of them with plumes. The Professor and Captain Nares saw a large flock ; and, again, none of them were noticed with plumes. No other specimens were seen by the party. No. 246. Female : eyes brown.—*J. M.*]

Four specimens from Wanumbai, and one from Wokan.

1st. An adult "male" (No. 249), but not in full dress, wanting the long yellow feathers on the sides.

2nd. A "male" (No. 248) not fully adult, having the two middle tail-feathers with very large webs, like the lateral ones, and longer than these, one about two inches, the other only one inch ; they are of a lanceolate shape.

3rd. An adult "female" (No. 247) with yellowish nape.

4th. A young "male" from Wokan (No. 202).

5th. A young "female" (No. 246). The two last are exactly alike in colour ; but the male is larger than the female. Both have no yellow on the nape.

31. CICINNURUS REGIUS (Linn.).

Cicinnurus regius, Salvad. Ann. Mus. Civ. Gen. ix. p. 192. sp. 24 (1876) ; Sharpe, Cat. B. Brit. Mus. iii. p. 171 (1877).

[No. 201. Male : eyes dull red ; legs a delicate sky-blue ; the stomach contained a few remains of insects. This bird was shot by Mr. Abbot ; two others were in company with it at the time. These were the only specimens seen, either by Mr. Abbot or any other of the party. They were not apparently very shy. A gun is said to have been fired, close by, just before they were observed. No. 241. Male, shot at Wokan : eyes dull red ; legs delicate sky-blue or cobalt blue. Nos. 242, 243. Males, shot at Wanumbai. Nos. 250, 251. Males : eyes yellow. No. 252. Male (young) : eyes yellow.—*J. M.*]

Seven specimens—one fully adult "male" (No. 201) from Wokan, and five adult "males" (Nos. 241, 242, 243, 250, 251), and a young "male" (No. 252) from Wanumbai.

32. MANUCODIA ATRA (Less.).

Manucodia atra, Salvad. Ann. Mus. Civ. Gen. ix. p. 189. sp. 4 (1876) ; Sharpe, Cat. B. Brit. Mus. iii. p. 183 (1877).

[Nos. 209, 210. Male, female : eyes orange ; legs black ; the stomach contained fruit and seeds.—*J. M.*]

The male is larger than the female.

33. *ÆLURŒDUS MELANOTIS* (G. R. Gr.).

Ptilonorhynchus melanotis, G. R. Gr. P. Z. S. 1858, p. 181, Aru, (type examined).

Ælurœdus melanotis, Gould, B. of New Guinea, pt. i. (1875); Salvad. Ann. Mus. Civ. Gen. ix. p. 193, sp. 28 (1877).

[No. 211. Eyes red; legs with a bluish tinge. Appears to be a young bird; could not make out the sex.—*J. M.*]

Mr. Gould has expressed some doubts about *Æ. arfakianus*, Meyer, being really different from this species; but the greater amount of black on the head and on the neck of *Æ. arfakianus*, the triangular shape of the light spots, with the acute angle turning downwards, on the upper part of the breast, and the smaller dimensions, distinguish at once the New-Guinea bird from its Aruan relative.

34. *PTILOPUS IOZONUS*, G. R. Gr.

Ptilonopus (!) *iozonus*, G. R. Gr. P. Z. S. 1858, p. 186, Aru (type examined).

Ptilopus ionozonus, Salvad. Ann. Mus. Civ. Gen. ix. p. 198. sp. 24 (1876).

[No. 289. Wanumbai, female: legs red; base of upper mandible red, tip yellow; lower green, with the tip lighter; stomach empty.—*J. M.*]

35. *PTILOPUS CORONULATUS*, G. R. Gr.

Ptilonopus coronulatus, G. R. Gr. P. Z. S. 1858, p. 185, pl. 138, Aru (type examined).

Ptilopus coronulatus, Salvad. Ann. Mus. Civ. Gen. ix. p. 198. sp. 26 (1876).

[Nos. 220, 221. Wokan, males: eyes red; bill green; feet red (dull); stomach empty.—*J. M.*]

36. *CARPOPHAGA ZOËÆ* (Less.).

Columba zoëæ, Less. Voy. Coq. Zool. Atlas, pl. 39 (1826), i. pt. 2, p. 705 (1828), Dorey (type examined).

Carpophaga zoëæ, Salvad. Ann. Mus. Civ. Gen. ix. p. 201. sp. 47 (1876).

[No. 236. Wanumbai, male: eyes white; legs red; beak black; stomach contained seeds. Shot at Wanumbai.—*J. M.*]

37. *MACROPYGIA DOREYA*, Bp.

Macropygia doreya, Bp. Consp. ii. p. 57 (1854), New Guinea (type examined); Salvad. Ann. Mus. Civ. Gen. ix. p. 204. sp. 65 (1876).

Macropygia phasianella, part., G. R. Gr. (nec Temm.), P. Z. S. 1858, p. 187, Aru Islands only; Wäll. Ibis, 1865, p. 389. sp. 81 (partim).

[No. 254. Wokan, female.—*J. M.*]

38. MEGAPODIUS DUPERREYI, Less. & Garn.

Megapodius duperreyi, Less. & Garn. Bull. Sc. Nat. viii. p. 113 (1826), Dorey (type examined); Less. Voy. Coq. Zool. i. pt. 2, p. 700, 703, pl. 36 (1826–1828).

Megapode reinwardt, Temm. Pl. Col. livr. 37, genre *Megapode* (1823).

Megapodius rubripes, Temm. Pl. Col. 411 (25th October 1826¹), Celebes! Amboyna!

Megapodius reinwardtii (sic), Temm. apud Wagl. Syst. Av. Gen. *Megapodius*, note (1827), descr. nulla.

Megapodius reinwardtii, Wagl. Syst. Av. Gen. *Megapodius*, Ad-ditamenta, sp. 4 (1827).

Megapodius rufipes, S. Müll., Verh. Land- en Volkenk. pp. 23, 109 (1839–1844), Utanata.

Megapodius, sp., Wall. Ann. & Mag. Nat. Hist. (2) xx. pp. 473, 477 (1857), Ké, Aru.

[No. 230. Female: eyes dull red; legs orange; bill horn-colour.—*J. M.*]

A female (No. 230) from Wokan.

39. NUMENIUS UROPYGIALIS, Gould.

[No. 258. Wanumbai, male.—*J. M.*]

40. TRINGOIDES HYPOLEUCUS (Linn.).

[No. 227. Dobbo, female: legs light green; bill dark green; eyes hazel; stomach contained insects.—*J. M.*]

7. On the Systematic Position of the Momotidæ.

By A. H. GARROD, M.A., F.R.S., Prosector to the Society.

[Received December 3, 1877.]

In my paper on certain muscles of birds and their value in classification², I have made an error, which I desire to correct, with reference to the systematic position of the Momotidæ. I there included them with the Coraciidæ as part of a single family, characterized among the Anomalogonatæ by the possession of a nude oil-gland, together with colic cæca. Since the time my paper appeared, I have had the opportunity of dissecting several species of Momotidæ, thanks to the kindness of Mr. O. Salvin, including *Momotus lessoni*, *M. æquatorialis*, *M. brasiliensis* (a specimen which had lived in the Society's Gardens), *Hylomanes gularis*, and *Eumomota superciliaris*; and I find that in none of these are colic cæca present.

Further, in *Hylomanes gularis* and *Eumomota superciliaris* I find

¹ I doubt whether this date, given by Crotch (Ibis, 1868, p. 500), for the publication of the 69th livraison of Temminck's 'Planches Coloriées,' is exact; my doubts rise from the fact that *M. rubripes* is not mentioned by Wagler in his 'Systema Avium,' published in 1827.

² P. Z. S. 1874, p. 123.